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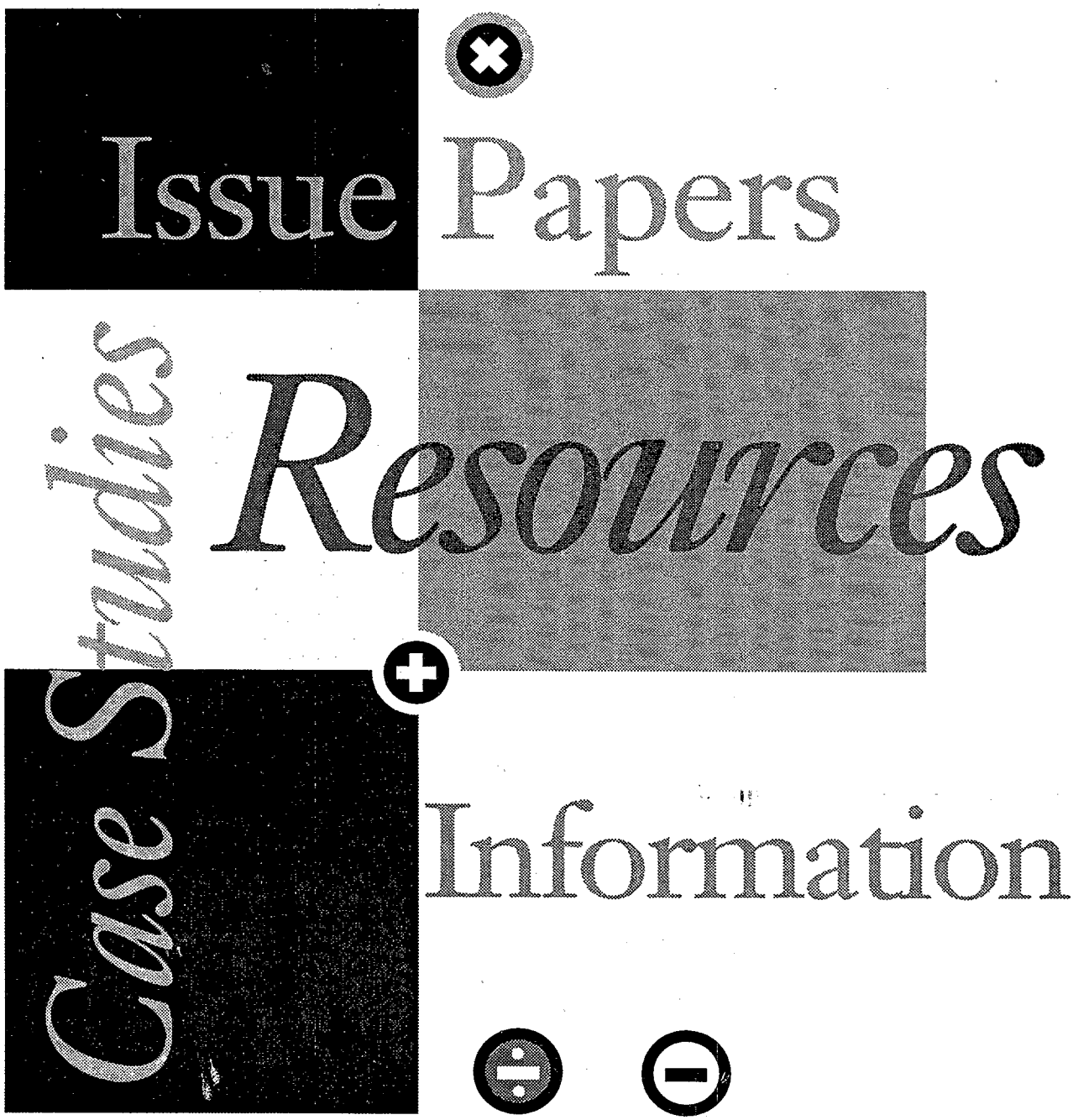
Full Cost Accounting Resource Guide



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Note: The information in this resource guide was obtained from government and association sources believed to be reliable. Neither the analyses nor the content of the resources necessarily reflect EPA's views.

Full Cost Accounting Fact Sheet, National Recycling Coalition, Alexandria, VA, 1996. (No cost; 703 683-9025)

This fact sheet was developed to provide general guidance to local government officials on the principles of FCA and how it can benefit their community's programs. Developed by the National Recycling Coalition's Full Cost Accounting Subcommittee, the fact sheet covers how FCA works, cost components to include, barriers to its implementation, case study information and resources, and how FCA can help a community achieve increased reduction through more informed planning and management decisions.

"Full Cost Accounting in Texas," Dave S. Yanke, *Texas Town and City*, February 1995, pp. 12-15, 24, 28. Texas Municipal League, Austin, TX. ($2; phone: 512 719-6300)

This 6-page article describes two FCA methods: a modified cash basis and an accrual basis. The difference between the systems is that principal payments and cash capital outlays are used to recover capital costs instead of depreciation expenses. The author explains that Texas has chosen to use the modified cash basis because it can help cities prepare and evaluate solid waste rates by recovering the cash costs associated with these services. Establishing the cost of such service-based rates can help cities avoid potential revenue shortfalls and examine different scenarios of services, capital expenditures, and increased capital costs. Through examples and exhibits, the author also addresses the cost components involved when developing cost-based rates, allocating costs among programs, allocating program costs among customer types, and developing user fees.

"Full Cost Accounting: What Is It? Will It Help Or Hurt Recycling?", Norm Crampton, *Resource Recycling*, September 1993, pp. 57-61. Resource Recycling, Inc., Portland, OR. ($4; phone: 503 227-1319)

This 4-page article discusses FCA legislation in three states: Indiana, Florida, and Georgia. The states' approaches to FCA are explained, with examples from select cities. Many of the benefits and barriers to various methodologies are presented. A major benefit of FCA is providing cities, towns, and waste districts with a new financial management tool to defend their programs on a cost basis. In Indiana, FCA has allowed the City of Franklin to show the cost relationships between disposal and recycling. Subsequently, a private contractor was hired to provide solid waste services that now include recycling at a lower cost than before. Florida has shown little success in implementing its FCA law due to a lack of resources and enforcement personnel. Many communities in Georgia comply with the law; however, it appears as though few truly understand the methodology or have sufficient records to complete the report adequately.

***Full Cost of Providing Garbage Collection and Disposal, Recycling, and Yard Waste Services in Indiana Cities and Towns During 1993: Special Report No. 5 to the Indiana General Assembly*, Indiana Institute on Recycling, Indiana State University, School of Education, Terre Haute, IN, 1994. (No cost in-state, $10 out-of-state; phone: 812 237-3000)**

This special report outlines the 1993 findings of Indiana's statewide law requiring all cities and towns that provide solid waste services to calculate the full cost of service annually. The cost reports are received at the Indiana Institute of Recycling, where the information is analyzed and used to produce summary documents. Some of the findings contained in this report are as follows: 211 Indiana cities and towns indicate they avoided $3.3 million in dumping costs through yard waste and recycling programs; yard waste diversion programs were found to be the least costly solid waste management program provided by cities and towns; and the percentage of costs associated with specific services are: 41 percent for garbage collection, 23 percent for garbage disposal, 22 percent for recyclables collection, and 14 percent for yard waste programs. A series of 11 charts are included for 1993 and illustrate the summary statistics for solid waste services in Indiana.

"How to Calculate Waste Disposal Costs," Leonard E. Joyce Jr., *Government Finance Review*, August 1990, pp. 20-21, 48. Government Finance Officers Association, Chicago, IL. ($6; phone: 312 977-9700)

This article discusses the costs associated with setting up a landfill facility, including development, initial construction, operation, and closure/postclosure. A worksheet is provided to demonstrate the components and cost categories involved. A cost estimate for a hypothetical landfill also is provided.

***How to Compare Costs Between In-House and Contracted Services*, Lawrence Martin: Reason Foundation, Los Angeles, CA, March 1993. ($11; phone: 310 391-2245)**

Many considerations enter into the decision to contract out MSW services, including cost. This document provides a step-by-step approach for local governments to assess the full cost of these services. Because government activities are typically funded through several departments, officials may be unaware of the full cost of providing a given service. For example, they may not consider indirect costs such as pension plans and administration. This document identifies costs that are often ignored and those that should be considered when comparing service options.

Issue Paper, Subcommittee on Economics/Full Cost Accounting, NRC Policy Research Committee, **National Recycling Coalition, Inc., Alexandria, VA, September 1995. (No cost; phone: 703 683-9025)**

This paper describes the rationale for encouraging FCA, the issues surrounding FCA, and the historical relationship that FCA has in the National Recycling Coalition. Topics discussed include planning issues, financing, evaluation criteria for FCA models, implementation methodologies, and barriers to implementation. Implementing FCA on the local level will require that significant and diverse barriers be overcome. NRC recommendations include identifying barriers; developing tools, guidance documents, and a standardized methodology; and incorporating the research currently being done on life-cycle assessment for MSW management options into FCA studies. An appendix provides an overview of the existing programs in four states (Florida, Georgia, Indiana, and North Carolina). A table comparing the cost centers (collection, contracting, processing, etc.) in each state also is provided.

Modeling University City's Integrated Waste Management System in WastePlan, **1994-1998, Paul Ligon, September 1995;** *Modeling Park Hills' Integrated Waste Management System in WastePlan,* **Paul Ligon and Robert Graff, December 1995;** *Existing and Future Solid Waste Management Systems in the Regional Plan Association Region,* **November 1992, Tellus Institute, Boston, MA. (No cost; 617 266-5400)**

These three documents profile three cities' waste management systems and plans using WastePlan, a user-friendly computer modeling tool developed by Tellus Institute. WastePlan creates a model of current solid waste systems that is used to investigate how changes to the system would affect system costs and revenues. It presents outcomes in terms of waste flows, diversion rates, collection truck and labor requirements, processing and disposal capacity needs, total costs, and costs per ton. In essence, WastePlan simulates a full cost accounting approach to solid waste planning. In University City, WastePlan projected the additional equipment and labor costs that would be incurred from expanding the recycling program, as well as the cost reduction realized for each ton of recyclables handled. The Park Hills analysis shows that changing from a flat fee system to a pay-as-you-throw system would meet several of the city's goals, including reducing waste generation, increasing recycling rates and balancing waste disposal costs and revenues. In 1992, WastePlan found that if New York City implemented recycling, composting, and waste prevention education programs, overall solid waste management system costs would decline significantly in the New York Metropolitan Area and would be no more expensive than alternative programs that would rely exclusively on landfilling and incineration.

"Public/Private Competition in the City of Phoenix, Arizona," Jim Flanagan and Susan Perkins, *Government Finance Review*, June 1995, pp. 7-12. Government Finance Officers Association, Chicago, IL. ($6; phone: 312 977-9700)

By initiating a competitive process for all city services, Phoenix, Arizona, created a system that provides the best service for the least cost. By involving city departments in competition with private contractors in a public-bid situation, and by using FCA, it has been able to compare 13 service areas and save a total of more than $27 million. The competitive process demands that efficiency and customer satisfaction be established as the most important values. The attention paid to these factors also leads to creative approaches to equipment design, staffing, and costs. Because of this approach, solid waste programs in particular have benefitted—better equipment has been purchased, the life of a landfill was extended by providing a contractor with monetary incentives to compact materials, and a transfer station was developed.

"Solid Waste Forum-Full Cost Accounting," Abraham Michaels, P.E., *Public Works*, November 1995, pp. 60, 62. Public Works Publications, Osterville, MA. (No cost; phone: 508 428-9282)

This editorial provides an overview of FCA principles and explains that it is a practice that has been used for many years. Many communities may be using FCA without being aware that the term "FCA" is applicable to their practices. The American Public Works Association has been promoting FCA in its documents since the 1960s. The author reviews two of these documents. In addition, the author suggests that the recent interest in FCA might be due to recycling. He suggests that while in the past, the financial factors that influenced costs and management of solid waste services were under the control of local governments, these governments have no control over the value of recyclables. He also believes that the recent movement to encourage local governments to take into consideration the closure and postclosure costs in their budgets encouraged the use of FCA. The author also mentions EPA's efforts to promote FCA by working with a workgroup and preparing outreach and technical materials, and reviews some of the communities and states that are promoting FCA as well.

Integrated Municipal Solid Waste Management, Solid Waste Association of North America (SWANA), 1995, Silver Spring, MD. (For full report, $255 for SWANA members; $300 for nonmembers. For summary report, $42.50 for SWANA members; $50 for nonmembers; phone: 301 585-2898 ext. 239)

This 1,000-page report presents principal findings from case studies on six integrated solid waste management systems: Minneapolis, Minnesota; Palm Beach County, Florida; Scottsdale, Arizona; Seattle, Washington; Sevierville, Tennessee; and Springfield, Massachusetts. The purpose of the case studies was to develop and present consistent cost, resource use, and environmental regulation information on each system. A full cost accounting approach was used for the cost analysis in each of the six case studies. Major findings include: (1) examining program costs on an incremental basis proved to be extremely useful for decision-making; (2) collection of MSW, recyclables, or yard trimmings represents the most significant system cost; (3) additional energy consumed to collect and process recyclables and yard trimmings is relatively small. Detailed descriptions are provided for all findings. A summary report is also available.

Full Cost Accounting Handbooks

The following handbooks and guidance manuals are produced by or for local communities that are implementing FCA. They can be obtained directly from the federal, state, or local entity, as listed.

***Component Cost Summary*, Solid Waste Authority of Palm Beach County, West Palm Beach, FL, March 1995. ($7.20; phone: 407 640-4000, ext. 4220)**

This document summarizes the cost components of the Solid Waste Authority's integrated solid waste management system in fiscal year 1994. The focus of the report is on the direct costs of operating the solid waste facilities and programs, including upfront and backend expenditures (e.g., acquisition of land and materials and postclosure care of the landfill). Palm Beach County uses the FCA data to improve decision-making. The report presents a comprehensive flow chart of the county's waste flow and tables showing landfill tonnage per year, recyclables revenues per ton, cost of landfilling per ton, etc. It describes many of the Authority's programs and its methodology for finding the full costs.

***Full Cost Accounting for Municipal Solid Waste: A Handbook*, Office of Solid Waste, U.S. Environmental Protection Agency, EPA530-R-95-041, October 1995. (RCRA Hotline, phone: Washington Metro Area: 703 412-9810, or TDD: 703 412-3323; Long Distance: 800 424-9346, or TDD: 800 553-7672)**

This handbook is a comprehensive source of information on FCA for MSW programs. The key concepts and benefits of FCA are explained. Some of these principles include clarifying what and whose costs to cover, identifying activities to be costed and resources involved, supplementing available financial data, allocating overhead costs to solid waste services, and reporting cost information to different audiences. The benefits of FCA include determining the actual MSW management costs, explaining MSW costs more clearly to citizens, adopting a businesslike approach to providing MSW services, and increasing cost-effectiveness through fine-tuning MSW management. While the handbook is not a step-by-step "how-to" document, it does describe the steps involved with implementing FCA for solid waste management. References and a glossary of terms are included.

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